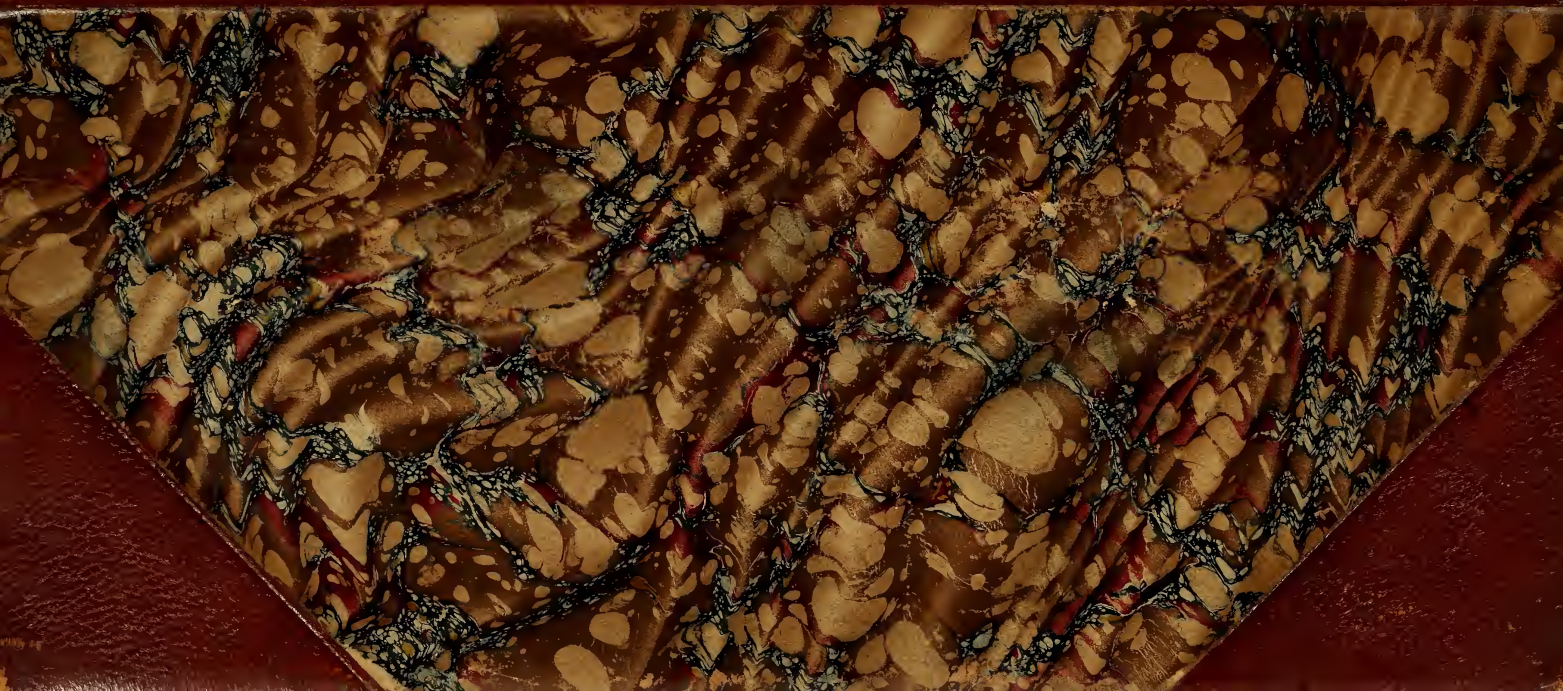

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A

TREATISE

ON THE

HYDROCELE.

By LAWRENCE NANNONI,

PROFESSOR OF SURGERY

TO THE

G. D. OF TUSCANY'S COURT;

AND

FELLOW OF SEVERAL ACADEMIES

IN

EUROPE.

LONDON:

PRINTED FOR THE AUTHOR, BY W. MACKINTOSH.

TO THE HONORABLE

COLONEL,

SPENCER COWPER.

SIR,

WHATEVER contributes to the immediate Welfare of Society, ſhould always appear under the Patronage of Promoters of Arts and Sciences. This Treatiſe therefore, wherein proper Methods

are

are offered to reſtore Health, ſo eaſily loſt, and ſo difficultly regained, juſtly claims your Protection: and the Name of COWPER prefixed to the following practical Obſervations in Surgery, will give Sanction to the early Production of an Italian Writer in England, and confer an everlaſting Honor on,

Sir,

Your moſt obliged

Humble Servant,

London,
March, 1779.

L. NANNONI.

PREFACE.

THE great benefits arising from the practise of Surgery, induce me to publish the few following facts, founded on actual experiments, and if they should be the means of throwing any light on the established methods for curing the Hydrocele, I shall think myself amply rewarded. It is true, that after the many illustrations, and incomparable rules of Garengeot, Bertrandi, Le Dran, Sharp, Pott,

Pott, Elſe, Sabatier, Louis, and others, little more can be expected on this intereſting ſubject. But too much I think, can never be advanced on a ſubject, whoſe object is the health and happineſs of mankind; and it is a malancholy truth, that not only health and happineſs, but even life itſelf has been often loſt for want of attending to the nature and progreſs of diſeaſe. Obſervations in Surgery are of the utmoſt conſequence, but how few have been able to communicate what they have ſeen to others? I labor under

the

the very great disadvantage, of being obliged to express my thoughts in a foreign language, but I hope for that indulgence so impartially granted by a candid Public, to all the investigators of truth and knowledge, daily resorting to this learned kingdom.

ERRATA.

Page 12, *line* 12, *for* fouth *read* fourth
—— 15 — 16, *f.* extravaſates *r.* extravaſates,
—— 17 — 1, *f.* cure *r.* cure,
—— 23 — 1, *f.* vent. *r.* event.
—— 31 — 6, *f.* unfortuneately *r.* unfortunately
—— 39 — 3, *f.* compneſs *r.* compreſs
—— 54 — 5, *f.* were *r.* where

A

TREATISE

ON THE

HYDROCELE.

SOME chirurgical diſeaſes allow ſome delay for their cure, others require immediate aſſiſtance. Many infirmities incident to the human frame, are of this kind. The diſeaſe commonly known by the name of Watery Rupture, and in ſurgery, by that of Hydrocele, belongs to

the firſt claſs. It often attends infants at their birth, as if affected with it in the mother's womb. Every age is likewiſe ſubject to the Hydrocele, and a perfect knowledge of it, is of the utmoſt importance. How many unhappy people have been victims to the ignorance of practitioners, who miſtook it for another diſeaſe, and in order to cure it, an operation has been ventured on, which proved fatal to the unfortunate patient. To attain a thorough knowledge of this diſorder, has been the particular ſtudy of the moſt learned writers of this age in Europe.

So much has been ſaid upon the Hydrocele, and ſo many reſearches made, that it has been thought to need no farther explanation. Something however ſhould be

be ſaid to clear certain points, which conſidered in another light, appear different from their true ſtate. Having had occaſion to ſee many of theſe caſes, I have ſought the opportunity to make my obſervations upon them, and perform the radical cure. My publiſhing theſe remarks will cauſe, I hope, ſome inſight, into the different parts of the chirurgical practice, for the radical cure of the Hydrocele, as nothing ſhall be omitted, that may tend to explain the difficulties hitherto encountered.

I ſhall begin with the ſeat, and the different kinds of Hydroceles, determining thoſe, that are the chief objects of radical cure, which ſhall be mentioned particularly. It ſeems almoſt incredible, that

even

even the ſeat of the Hydrocele ſhould be diſputed, but what was doubted in former times, is not ſo now, at leaſt by the beſt practitioners.

Many are the ſeats which have been allotted to the Hydrocele. The firſt kind has its ſeat in the cells of the Dartos. In the ſecond, the water lies between the Dartos and the Cremaſter. If the water is contained between this and the tunica vaginalis, then the Hydrocele is of the third kind. The fouth conſiſts in the ſtagnated water between the tunica vaginalis and the teſticle; and the laſt, between the albuginea and the teſticle. It is certain that any kind of Hydrocele may be formed in this place. Water ſtops in ſome part of the body, and it is natural, that

that ſome may ſtop between the different veſts of the teſticle, and the ſpermatic chord; but examining it minutely, it muſt be owned freely, that ſuch a great variety of diviſions is owing rather to caprice than reality. Let it ſuffice, that water may lie in any part of the body for ſome time, or for ever. It remains very often in the cells of the ſcrotum, but for all this an Hydrocele may not be formed, for its denomination is occaſioned only by a ſwelling, compoſed of water contained in a ſac. The philtration of water into the cells of the ſcrotum, if followed by the anaſarca, whether it is owing to a defect in the organs or not, is the province of the phyſician. Nevertheleſs it follows, that ſometimes the ſurgeon is occupied

occupied in giving relief to the patient who labours under its weight. The relief which in ſuch caſes can be expected from chirurgical aſſiſtance, is to give iſſue to the water, for which great, or ſmall inciſions are generally preſcribed. The greateſt are performed with extreme caution by the ſkilful, as it has been obſerved, that gangrene often follows, and haſtens death. The indefatigable Engliſh ſurgeon, Mr. Pott, who I ſhall have frequent occaſion to mention with all the reſpect due to ſo great a genius of ſurgery of the eighteen century, relates many obſervations of this kind in his treatiſe on the Hydrocele. Small inciſions may be uſed with ſafety, and theſe are found in practice preferable to the others. If the ſtagnated

water

water in the cells of the ſcrotum is only partial, as is often obſerved in infants, it gives way very eaſily to the vital actions, or to ſome little corroborative, or abſorbent, and it is very rare that it is found neceſſary to make uſe of any operation.

Some writers of ſurgery have heſitated to believe that the moſt frequent kind of Hydrocele ſhould be between the tunica vaginalis, and the teſticle. This wonder is deſtitute of all reaſon, as in the moſt healthy ſtate, there is always a little fluid in the cavity of the tunica vaginalis. Whenever for ſome reaſon it happens, that a greater quantity of water extravaſates this certainly will fix more eaſily between the tunica vaginalis, and the

teſticle, than any other place. I cannot imagine how ſome people have doubted, that this kind of Hydrocele is the moſt frequent, and preciſely that, which according to the true rules, I do believe muſt be conſidered as the true ſpecie.

The water that compoſes the Hydrocele of the tunica vaginalis of the teſticle, has ſometimes its ſeat between this, and the foreſaid tunica, and at other times between the vaginalis, and the ſpermatic chord. Hydatides which are ſometimes found in the tunica vaginalis, hinder very little the cure, as I ſhall have occaſion to mention hereafter, when I come to ſpeak of the complications of the Hydrocele. Before I enter on the particulars of an Hydrocele, and of its cure,

cure I ſhall mention that, which is obſerved on the abatement of that inflammatory tumor of the teſticle, known by the name of ſpermatocele, generally attending the venereal diſeaſe; at the beginning, this tumor does not ſhew the leaſt tranſparency, but at the end becomes quite lucid.

The water that forms this Hydrocele diſſipates gradually, in proportion as the ſolids regain their force, and in this manner the diſeaſe ends. It is quite needleſs to give vent to the water, as it is ſoon replaced, and ſometimes in greater quantity; the Hydrocele being nothing elſe but an effect of the diſeaſe. This water diſſipates entirely by itſelf, and no remedy will contribute to it.

To prove, that the water in this caſe ſoon returns in a great quantity after the inciſion, I ſhall relate the following caſe.

CASE I.

A Countryman was admitted into the Royal Hoſpital of Sancta Maria Nuova, in Florence, with an inflammatory tumor in his right teſticle; the diſeaſe was then in its beginning, which had no immediate, nor remote origin from the venereal diſeaſe. The common applications were not omitted to facilitate the diſſolution of the tumor which generally happens. As ſoon as the pain was over, and the part reduced to its natural colour, the ſwelling became tranſparent all over, and the teſticle recovered

recovered its perfect ſtate. After ſome days the inflammation ceaſed, and yet the Hydrocele was the ſame, although the uſe of corroboratives was not forgotten. We reſolved to give vent to the water with a lancet, and yet, in leſs than forty-eight hours, the ſame quantity of water gathered again. Some days after the ſame operation was repeated, and this ſecond operation was not more ſucceſsful than the firſt, for a greater quantity of water than what had been extracted appeared. On ſeeing this, we relinquiſhed the thoughts of all further operations, and ſuſpended all remedies, chuſing rather to truſt to nature, which actually produced the ſame effects as in many other caſes, the water went off. This plainly proves what I have already ſaid, that the delaying the operation in

ſuch

ſuch caſes, is of the greateſt conſequence; but if it is neceſſary to give vent to the water, it muſt not be done till after the inflammation is abated: for then it will be natural to believe that the ſolids may reſiſt the fluids.

The Hydrocele that appears on the decline of an inflammatory tumor of the teſticle and its membranes, diſſipates without mercury; for if this mineral any way contributes to it, it is only by deſtroying the celtic venom which is often the cauſe of it.

The water that forms an Hydrocele, is ſometimes contained in a ſac, formed in the tunica vaginalis of the teſticle, and the ſpermatic chord. A caſe which I think

think very particular, upon this ſubject, is the following.

CASE II.

A Boy of ſix years old, was admitted as a patient into the aforeſaid hoſpital ſuppoſed to have a rupture, and particularly an enterocele; when the tumor was preſſed, the matter which formed it, went into the abdomen. This ſerved to confirm my father, that it was an inteſtinal hernia. As the boy's parents, and we likewiſe, were very deſirous to ſee their ſon delivered from ſuch a diſorder, we determined to perform the radical cure by binding the herniary ſac, which method was revived with ſucceſs in Florence by my father. Of this operation I have

have ſpoken at large in a diſſertation which I read to the Royal-Academy of Surgery at Paris in Auguſt 1778, and which I ſhall give to the public with many more remarks on inteſtinal hernias, when I ſhall have time to compile the many obſervations I made in walking with my father the hoſpitals of Florence, and by my practice in different hoſpitals in Europe. On performing the operation on this patient we diſcovered the ſuppoſed herniary ſac, and having ſeparated it from the parts to which it was united, we tied it as near as poſſible to the inguinal ring. The inflammation which followed the wound was very great, and it attacked in a very ſhort time the inteſtines. The delicate child died. Death was the cauſe of ſorrow, but we acquired

quired new knowledge by the vent. Having opened the abdominal cavity, and examined the parts which had been the ſeat of the operation, we could not find the leaſt appearance of inteſtinal hernia. There was a little ſac joined quite round the internal part of the inguinal ring, from which it deſcended into the tunica vaginalis where it faſtened, and from which it had been parted in the operation. This ſac was full of water, which retired into the interior part when the exterior was preſſed, and this was what cauſed the miſtake in believing the diſeaſe to be an inteſtinal hernia.

The water which compoſes the Hydroceles of ſome children, goes into the cavity of the belly when the tumor is ſqueezed, the

the inguinal ring not being cloſed. The caſe which I have related is quite different from ordinary Hydroceles, and I hope that I have explained myſelf enough upon this particular.

Water ſeldom ſtops between the cremaſter and the tunica vaginalis, or between that muſcle and the ſcrotum. Rarely in a ſac formed in the vaginalis of the teſticle, or of the ſpermatic chord. The Hydrocele which has its ſeat in the cavity of the tunica vaginalis teſtis is the moſt frequent. It is very eaſy for the moſt part to know the Hydrocele, but in ſome caſes very difficult. If we treat of an ordinary Hydrocele, the tranſparency proclaims it, but if any of the complications which I ſhall have occaſion to mention hereafter, are joined with the Hydrocele, what difficulty

does

does not the moſt ſkilful undergo to diſtinguiſh it from another diſeaſe?

An Hydrocele has been taken for a Sarcocele, or the latter for the former. In both caſes much harm has been done. If an Hydrocele is taken for a Sarcocele, the ſurgeon will think it neceſſary to perform caſtration. If a ſarcocele, or any other tumor of the teſticle, or epidimis, is believed to be an Hydrocele; he will be induced to make an opening, which will prove of great detriment to the patient. My father has publiſhed a caſe about a tumor confined in the ſcrotum which was taken for an Hydrocele, in the firſt volume of his works on the ſimple method of curing. This is the caſe.

" A Milaneſe jeſuit came to Florence, with a tumor in the ſcrotum, of the ſhape of a ſmall melon: it had a kind of ſuppleneſs ſimilar to tumors of the fleſhy mucous kind. This ſuppleneſs was thought by ſome profeſſors to ariſe from feculent water; but my father thought otherwiſe. The diſeaſe was examined by many ſurgeons of Italy, the majority of whom, were of opinion that it was an Hydrocele; and it was therefore reſolved to puncture it with the trocar, but to their great aſtoniſhment it was found not to contain a ſingle drop of water. The external air admitted into the internal part of the tumor by the operation, occaſioned ſo violent an inflammation and ſwelling, that it ſoon arrived to ten times its former bulk. Gangrene ſucceeded the inflammation, and the whole of this ſpongy tumor formed of nothing

thing but a thickening of the cellular ſubſtance and membranes, covering the teſticle and ſpermatic chord, ſloughed away. When the dead parts had fallen off, the teſticles a little altered were expoſed without any covering; and whilſt the ſurgeon was waiting for nature to cover, and reſtore them to their wonted vigor; the patient was attacked by one of thoſe colics generally attending weak and debilitated perſons, and the inflammation of the colon was ſo great, that no remedy could ſave his life." Thus the death of a man was haſtened by an ill-judged operation, which will ſerve, with many other ſimilar caſes, as a caution to practitioners, not to open tumors of the ſcrotum, which are not of the Hydrocele kind. Surgeons have been led into miſtakes, by obſerving that the fluid compoſing an Hydrocele, is ſometimes extremely

tremely viſcous and dark coloured; in ſuch caſes it is indeed almoſt impoſſible, at leaſt to a hand not much accuſtomed to ſuch examinations, to determine the nature of the diſeaſe.

If on examination, the tumor is not tranſparent, and a true inſight cannot be obtained, it will be of great uſe to the ſurgeon to aſk the patient about the origin of the tumor, if it was ever tranſparent, and likewiſe if it began from the bottom of the ſcrotum. In ſhort, the opinion of the beſt practitioners ſhould be taken in theſe caſes; for the Hydrocele is ſometimes ſo complicated a diſeaſe, that it is very difficult not to fall into an error. When the nature of a tumor contained in the ſcrotum is doubtful, inſtead of riſquing an operation, which may be dangerous,

dangerous, it is better to wait till its true nature is known.

After mentioning the ſeat of the true Hydrocele, which is in the tunica vaginalis teſtis, and of the ſpermatic chord, I ſhall ſpeak of the cauſe of the Hydrocele, and proceed to examine the diſeaſes with which it may be complicated. The Hydrocele, like many other internal or external diſeaſes to which the human body is liable, derives its origin from either an external or internal cauſe. This happens ſometimes from the ſolids not having a proper check upon the fluids, thence enſues a watery tumor which conſtitutes the Hydrocele. If the cauſe is external, the diſeaſe generally vaniſhes with little or no aſſiſtance from art. What is produced in the ſolids by a mechanical cauſe, may happen ſometimes naturally.

The

The many different parts that compoſe the human frame, are not always of the ſame power, and conſequently not capable of reſiſting a fluid inclined to form a tumor. A diſſolution of the lymphatic fluid may contribute now and then to the production of the Hydrocele, which is very frequent in infants who need no chirurgical aſſiſtance; but it is not the caſe in adults, who may have it from their infancy, or be attacked afterwards.

The cure of the Hydrocele conſiſts in palliating the diſeaſe, or curing it radically.

THE PALLIATIVE CURE.

Surgeons in endeavouring to reſtore health, foreſee the dangerous conſequences

ces that may attend their operations, but cannot totally prevent them. An operation trifling in many caſes, has been of great conſequence in others, without their fault. This is the caſe with the palliative cure of the Hydrocele, which unfortuneately for mankind, has been the cauſe of death. This was in conſequence of an inflammation, after an opening by the trocar, or lancet. This inflammation, often terminates very ſucceſsfully, and the patient enjoys the pleaſure of a radical cure not in the leaſt expected.

Wounds though ever ſo ſmall, are ſometimes ſubject to mortal inflammations, particularly when there is in the body an inflammatory diſpoſition. How often has death followed after phlebotomy, the body being pre-diſpoſed to inflammation?

Who

Who can be ſo happy as to foreſee the particular ſtate of a conſtitution? It is very eaſy for an unſkilful operator to believe, that by the inſtrument, the teſticle may have been wounded. Although experience ſhews us that wounds in the teſticle are not generally mortal, it is yet certain, that a ſmall pricking may be attended with fatal conſequences. If the patient however has not ſuffered much pain in the operation, we may conclude the teſticle was not touched. In the caſe mentioned by my father, in the firſt volume of his ſurgery, the body ſeemed inclined to an inflammation.

" A man who had an Hydrocele, had the palliative cure repeated from time to time. The wound made by the trocar

was

was always eaſily healed. The laſt time by the ſame profeſſor, and with the ſame inſtrument, a wound was made, which having given exit to the water, was preſſed as uſual, and the ſcrotum put into a bag-truſs. The patient was quite well on the day of the operation; but on the following he felt a little pain, the firſt ſign of an inflammation, which in a ſhort time aroſe to ſuch a pitch, as to end in death. Upon diſſection it appeared, that the teſticle was not injured, the inflammation having raged only in the circumjacent parts."

The following caſe will exhibit quite the contrary,—a radical cure.

CASE III.

"A Franciſcan friar, of the convent of the Holy-ſpirit in Florence, had the Hydrocele from his infancy. When the water (which was always thick) was accumulated in a great quantity, it was let out by means of the trocar. At the age of 76, the bulk of the Hydrocele was too great for him to bear, ſo he reſolved to undergo another palliative cure. There iſſued a great quantity of blackiſh water. The wound inflamed, and there enſued a gangrene in the ſcrotum, and in the tunica vaginalis of both teſticles, which remained naked when the mortified parts ſeparated. This ſeparation happened quite naturally, there having been no occaſion for any of thoſe means neceſſary in other caſes."

caſes." Hence we ſee daily, that which is to be recommended in one caſe, it not in another. " The gangrene being ſeparated, and the wound diſpoſed to heal, the cacatrix began to form, and to extend with a ſtrength proportionable to ſuch advanced age, and a radical cure was obtained, when no operation could prudently have been recommended."

This was one of thoſe caſes, where the gangrene turned out to the advantage of the patient, but how many other times (and particularly when it depends upon an internal cauſe) has it been fatal.

The wound for the palliative cure is made with the lancet or trocar, which laſt leaves in it a cannula that facilitates very much the iſſue of the water, which does not

not pass so easily through a wound made by a lancet; and to give this facility, it is often necessary to introduce a hollow probe, whose introduction is sometimes painful to the patient. The perforation made by the trocar is therefore preferable to that of the lancet. The trocar must be of a proportionable size, smaller than that commonly used for the paracentesis. The opening should be made at a distance from the testicle; the center of the tumor will be the least dangerous, and the most proper place.

Sometimes, in consequence of the perforation for the palliative cure of the Hydrocele, an ecchymosis has happened. I have observed two kinds of ecchymosis, the first consists in blood poured into the cells of the scrotum; this was in consequence

quence of the wound in the tunica vaginalis, not being oppoſite that of the ſcrotum: the blood having found means to inſinuate itſelf into the cells of the dartos, as it often happens in phletobotomy. This ecchymoſis is of no conſequence, and will ſoon vaniſh.

The other kind of ecchymoſis was produced by blood retained in the ſame cavity which contained the water. The branch of an artery, either wounded by the inſtrument, or diſpoſed to open itſelf when the water was gone, depoſited ſome blood in the cavity of the tunica vaginalis teſtis and of the ſpermatic chord.

CASE

CASE IV.

"A Young man would never ſubmit to the radical cure of the Hydrocele, finding himſelf relieved by the palliative. The laſt time it was performed with a trocar, the water that iſſued was a little turbid: the patient ſaid, that he ſuffered no more pain than at other times. A ſhort time after, the ſcrotum ſwelled to a ſize equal to the Hydrocele. The tumor increaſing, the patient went to the hoſpital. My father found that what extended the ſcrotum, was extravaſated blood. The patient's ſtrength was ſo impaired, that frequently he fainted away. The tumor was opened by a longitudinal inciſion, and a great quantity of blood was found in the tunica vaginalis

lis by the bleeding of a branch of an artery. The blood being removed, a little compneſs of dry lint was applied with a proper bandage; by the compreſſion, the artery cloſed, the wound ſuppurated kindly, and healed in a ſhort ſpace of time. Thus the diſeaſe was radically cured.

THE RADICAL CURE.

This cure is ſometimes obtained contrary to the ſurgeon's expectation, by an inflammation which enſues the operation of the palliative cure.

Many are the methods preſcribed by antient authors, and practiſed by the moderns, for the radical cure of the Hydrocele. Operators, view the poſſibility of performing it differently, and

the methods they have put in practice, are various according to their ideas. To determine which of them is the beſt, one muſt decide in what it ought to conſiſt.

Some have ſuppoſed, that the radical cure of the Hydrocele could not be obtained without the deſtruction of the tunica vaginalis of the teſticle, and of the ſpermatic chord, whenever it was equally concerned in the diſeaſe. Others ſay, that the deſtruction of the tunica is unneceſſary, and that abolition of its cavity is ſufficient. From theſe different opinions derived the various means, which have been practiſed.

A florid

A florid and elegant diction may miſlead the reader, but theſe obſervations are founded on facts.

The radical cure of encyſted tumors, conſiſts in the deſtruction of the cyſts, or ſacs, that contain the matter. The deſtruction of the membranes which form theſe unnatural cyſts, is abſolutely neceſſary, for if a relapſe ſhould enſue, the remains might be ſuppoſed to be the cauſe, though I am perſuaded this ſuppoſition is without foundation.

The water of the Hydrocele, is contained in a natural ſac, or cyſt, formed by the tunica vaginalis of the teſticle, and of the ſpermatic chord. A natural part, becomes unnatural when altered by ſome cauſe: thence it is eaſy to conclude, that

the deſtruction of the tunica vaginalis is neceſſary to eſtabliſh a radical cure, when it is ſo changed, as not to be capable of paſſing again into its natural ſtate. On the contrary, its deſtruction is unneceſſary when in a ſound ſtate, as in moſt caſes it has proved. In this laſt caſe, I think I am warranted to conclude, from the experience I have had, that ſo far from its deſtruction being requiſite, that even an exfoliation is needleſs. The cure of the Hydrocele having proved in ſome caſes imperfect, it was ſuppoſed that this imperfection aroſe from part of the tunica vaginalis being left. Mr. Bertrandi, one of the beſt Italian ſurgeons, was of this opinion, and he agreed with the famous French ſurgeons, Le Dran and Garengeot, in the propriety of deſtroying that part of the tunica vaginalis, which

reſiſted

reſiſted the inflammation, with ſome kind of cauſtic. Hence ſeems to have ariſen the whim of uſing a cauſtic more or leſs powerful, as the antimonial butter made by Mr. Bertrandi, and the aluminous water recommended by Le Dran. Although ſome patients have relapſed, it has not been owing to a remnant of the tunica vaginalis, but to the inattention of the ſurgeon in ſuffering the external wound to cloſe, before a compleat obliteration of its cavity had been obtained. All that is wanted to perfect a cure of the Hydrocele is the abolition of the cavity of the tunica vaginalis, except when the tunic is in an unſound ſtate, then it will be neceſſary to deſtroy it.

It will be proper to make ſome obſervations upon the alterations produced in the parts

parts by a courſe of inflammation, and of that which proceeds ſlowly, and conſiſts in a change of nature and texture. This obſervation is of great importance, ſince in the laſt caſe a chirurgical operation was neceſſary; but not ſo in the former, as will appear by

CASE V.

A Man of 70 years of age, of a ſtrong conſtitution, and by trade a hoop-maker, in Florence, had been afflicted with an Hydrocele from his infancy; from the inconvenience of which, he was delivered by the palliative cure, as often as the water was collected in any great quantity; his occupation did not allow him to undergo the radical cure. Mr. Becherini

cherini repeated the operation with the frocar in 1776. The wound inflamed, and there enſued a great ſwelling of the ſcrotum, which quickly increaſed to twice its former ſize. The little wound continued open, and diſcharged a ſmall quantity of ſanious matter. The patient was carried to the hoſpital Sainta Maria Nuova, and put under the care of my father, who, finding an evident fluctuation of fluid, opened the tumor its whole length, which gave exit to a large quantity of bloody ichor. Some of the purulent matter adhered to the ſides of the ſac, formed by the tunica vaginalis and ſcrotum, which were thickened to a finger's breadth. This unnatural change of parts was produced by the inflammation which followed the wound of the frocar. Waſhing with warm water, and

the

the application of dry lint, were the only dreſſings uſed to cure the wound which was very deep, at the bottom of which the teſticle was perceived in a perfect ſtate. The inflammation ſubſided in ſome days, and the parts recovered their perfect ſtate of health. The tunica vaginalis, which had been ſo thickened, returned to its natural ſtate. The inflammation and ſwelling of the parts having gone off, they were drawn into contact, and followed by a reciprocal adheſion. The deep cavity was intirely filled by new healthy fleſh, and the formation of a cicatrix, compleated a radical cure, which was begun only as palliative.

By

By this, and other cafes that I could relate, I am fully perfwaded, that the fwelling and hardnefs of the tunica vaginalis produced by inflammation, will generally fubfide, and not require excifion. On the contrary, when the thicknefs and hardnefs, is not the effect of mere inflammation, but of a difeafe whofe progrefs has been flow, then excifion will be neceffary. But it muft not be blindly believed, that a cure cannot be obtained, when the tunica vaginalis is only a little thickened and indurated.

CASE VI.

A Young country man on the 7th of May 1772, in the hofpital of Santa Maria Nuova, had an incifion performed for the radical cure of the Hydrocele. The

tunica

tunica vaginalis was a little ſwelled, and hardened. This ſwelling was diſregarded, knowing that it would not obſtruct the cure. The wound was dreſſed with dry lint, and not diſturbed for three days, when the dreſſing was removed. The ſuppuration was large during the inflammation, and the parts ſwelled and hardened more. When the inflammation was over, the tunica vaginalis returned to its natural ſtate as we had ſeen in many other caſes; the parts came into contact, and the radical cure took place. The ſwelling of the tunica vaginalis did not hinder in the leaſt the cure, which was performed in about forty days.

It is not a little ſatisfactory to have ſuſpended in many inſtances, the uſe of inſtruments

ments and other ſevere methods. Had, in the laſt caſe, the hardened part been cut off, it is impoſſible to tell the conſequences that might have enſued. Daily obſervations evince, that an inflammation although it alters the parts, yet it diſpoſes them to regain their firſt ſtate, provided they have not loſt their organization; if they have, then inſtruments muſt be neceſſary, but they ſhould be uſed with caution. If the tunica vaginalis ſhould be a little ſwelled and hard, the beſt way is to wait the effect of the inflammation; if that does not avail, there will ſtill be time enough for ſubſequent operations.

I have endeavoured to prove by the preceding facts, that the deſtruction of the tunica vaginalis is not neceſſary, in

its cavity can be annihilated. I find another convincing proof for my opinion in the cure obtained by irritating the interior part of the tunica vaginalis, either by ſome inſtrument, or ſtrong liquor. The former as well as the latter, has produced inflammation, ſuppuration, and adheſion of the parts, and the radical cure of the diſeaſe.

By the foregoing obſervations, we may eaſily perceive, in what conſiſts the radical cure of the Hydrocele. The methods very proper in ſome, and improper in others caſes, may be reduced to ſeven, inciſion — exciſion — cauſtic — ſeton — tent—irritation—and percuſſion.

If authors, who have written on ſurgery, had viewed the caſes before them with

with the ſame eye, how much more ſimple and eaſy, would have been the practical part of the profeſſion.

Some for the ſake of ſingularity, have invented a variety of abſurd methods, which have been approved only by thoſe, who are attracted by novelty.

THE CURE BY INCISION.

The ſurgeon for the radical cure of encyſted tumors, has chiefly recourſe to inciſion, which is alſo applied to the cure of the Hydrocele. When inciſion does not anſwer the purpoſe, exciſion is neceſſary.

The learned and immortal Celſus, deſcribing the manner of operating, ſays, that

that it is neceſſary to open the integuments, and ſeparate the internal membranes; viz. the different ſtrata of the tela celluloſa, and the tunica vaginalis; and adds, that ſometimes it is proper to amputate ſome of the parts affected. What is recommended by ſo great a man, is always to be reſpected; and if many things publiſhed in his works are well conſidered, we ſhall find, that the moderns, do not differ much from the ancients. The preciſe method of Celſus, is not however neceſſary, as an inciſion may be made at once into the cavity of the tunica vaginalis teſtis.

Inciſion has been condemned by many, but I cannot gueſs what idea they formed to themſelves either in the uſe of it, or in the cure ſubſequent to the operation. The

operation

operation is trifling, in comparison to the merit of the cure.

It is easy to say, that there are objections to incision; and it is easy to prove, that the other methods have their inconveniences.

I shall here examine what are the objections to incision, which I think may be divided into two. First, the testicle may be injured in the operation; and secondly, the radical cure has not always been obtained. I shall answer the first objection by describing the operation. It consists in the opening of the tumor, as in the case of an abscess. This opening may be made with a bistory, from top to bottom, or vice-versâ. But there is more danger of hurting the testicle in the latter

latter method, than by the former, as it has ſometimes happened, although the reflection of a candle, placed at the oppoſite part of the tumor, ſhewed exactly were the teſticle lay. To avoid this error, it is better to begin the inciſion at the upper part and carry it downwards, at the ſame time; or by introducing a hollow probe, which will direct the cutting inſtrument. The inciſion ſhould be made the whole length of the tumor, as thereby a full view may be had of the bottom, and a total abolition of the cavity of the tunica vaginalis, may be more certainly accompliſhed; for if this cavity is not totally deſtroyed, a relapſe will enſue. After the inciſion, the cavity muſt be filled with dry lint, which ſhould not be removed for ſome days, until looſſened by ſuppuration, ſo as to come off without much

much pain. Some lenient application on the lint, ſhould now be uſed. A fever generally accompanies the inflammation, but does not laſt long. The fever, with the inflammation and ſwelling of the parts, gradually ſubſide, and the cure is terminated by a mutual adheſion of the tunica vaginalis and teſticle, and total annihilation of the cavity which contained the water. As the cavity of the wound obliterates, the cicatrix on its ſurface begins to form, and extend. The ſame dreſſings may be continued, and will, for the moſt part, be found ſufficient to heal the wound. In the courſe of the cure, ſome mild cauſtic may be neceſſary, to keep down the luxuriant granulations of fleſh.

The radical cure of the Hydrocele by inciſion, begun, continued, and ended in the

the manner I have deſcribed, does not take a long time. It is uſually compleated in the courſe of forty or fifty days; ſometimes in a month.

The cure by inciſion is eaſy, and ſafe, if properly attended to. Let me repeat it however, for the importance of the ſubject requires it, that if the ſurgeon is not careful to prevent the external wound from cloſing, before the internal cavity is totally obliterated, the cure will be incompleat, and that will be attributed to the method, which was entirely the fault of the ſurgeon. The diſadvantages attending this, is daily happening to the other methods, of which I ſhall ſpeak, without partiality for one, more than another.

THE CURE BY EXCISION.

Thoſe parts, that have ſuffered ſo great an alteration by diſeaſe, that they cannot be reſtored to their natural ſtate, muſt undergo amputation. Upon this principle, exciſion would be very juſt, but the removal of the tunica vaginalis, when in a ſound ſtate, is giving unneceſſary pain, without the leaſt advantage to the patient; the annihilation of its cavity, being alone ſufficient.

It is but ſeldom, that the ſwelling and hardneſs of the ſac, happens in the ſimple Hydrocele, but is very common in diſeaſes of the teſticle, whether a Sarocele, or Hydro-ſarcocele.

Mr. Douglas has adviſed exciſion for the radical cure of the Hydrocele, even in the ſound ſtate of the tunica vaginalis. Whether it is proper or not, I have ſpoken

at large. The manner of performing the exciſion is different. Mr. Douglas adviſes an oval exciſion, in which ſhould be comprehended that part of the ſcrotum, and tunica vaginalis, which is intended to be deſtroyed. There are objections, which might be made to this manner of operating by exciſion, but I ſhall confine myſelf to the caſes where the tunica vaginalis is diſeaſed. In my opinion, it is better to make an oblong inciſion with the knife, or ſciſſors, and then remove the parts affected; ſo doing, the ſurgeon cannot repent of having cut too much.

Some may think, that caſes in which exciſion ſhould be preferred, happen often, but I am of a contrary opinion, from the number of Hydroceles I have had opportunities of ſeeing.

THE CURE BY CAUSTIC.

Surgeons have been induced to uſe cauſtics, on account of the terror many patients have of inſtruments.

It would be uſeleſs to repeat what many writers have ſaid, or to ſearch who was the firſt that uſed cauſtics for the radical cure of the Hydrocele. Theſe are inquiries and diſputes which are to be found in other books. Among modern authors M. Sabatier's diſſertation on the Hydrocele, inſerted in the memoirs of the Royal Academy of Surgery at Paris, deſerves the higheſt praiſe.

Radical cures have been obtained by the cauſtic, without any inciſion ſo dreaded by the patient; thence cauſtics

came

came into repute. Much has been ſaid for, and againſt this method. The cauſtic cauſes an inflammation, which is indiſpenſably neceſſary for a radical cure. It produces an eſchar which generally falls off in ſome days; at other times remains ſo long, that it is neceſſary to make an inciſion to let out the water, and in this manner mitigate the pain cauſed by the inflammation, which diminiſhes when the parts are relaxed, by giving vent to the water. Mr. Garengeot having found it neceſſary to make an inciſion in many caſes, after the cauſtic had been uſed, alledged, That the cauſtic was uſeleſs, ſince it was neceſſary to make an inciſion alſo. I know very well, that inciſion is not wanted in all caſes, where cauſtic has been applied, but in ſome inſtances

ſtances it is, as the following caſe will prove.

CASE VII.

MR. Anthony Danville, a Lorraineſe, at the Royal Court of Florence, with a ſtrong conſtitution; put himſelf under the care of an old ſurgeon, for the cure of an Hydrocele, who applied on the tumor a cauſtic of a proper ſize. The inflammation produced by the cauſtic was very great. A violent fever, ſwelling, and pain ſoon followed. This was his ſituation when my father was conſulted. The eſchar, did not ſeem diſpoſed to ſeparate, and the pain was ſo great, that my father reſolved to let out the water by an inciſion, which abated the pain immediately.

The

The cure was the ſame as in the ſimple inciſion, and proved radical.

Mr. Elſe, firſt ſurgeon to St. Thomas's Hoſpital, in a treatiſe on the radical cure of the Hydrocele, mentions his having cured many by cauſtics. He thinks, to obtain a perfect cure, it is abſolutely neceſſary totally to deſtroy the tunica vaginalis. The obliteration of its cavity, is what muſt always be in view. Moſt of the cures performed by this Engliſh ſurgeon, of great merit, by cauſtic, have been effected in 26 days, others have required a month. The purpoſe of the ſurgeon, is to obtain a radical cure, and it is not of the leaſt importance, that the cure, be ten days, more or leſs in performing. The radical cure of the Hydrocele by cauſtic, is obtained by applying a certain quantity on a

part

part diſtant from the teſticle, by which an eſchar is formed. The inflammation cauſed by this application ſoon appears; when the eſchar is ſeparated, the water guſhes out; the ſame opening that gives exit to the water, allows likewiſe of any matter to paſs, which may be produced in the cavity of the tunica vaginalis, a part of which ſometimes exfoliates. The exulceration of the internal parts of the ſac, favor their adheſion; the accompliſhment of which, is the cure. It often happens, that in endeavouring to favor any particular method, all its inconveniences are omitted, and its advantages held up in the moſt favorable light. The reaſon why this method is preferred is, firſt, becauſe the uſe of inſtruments is unneceſſary: ſecondly, the patient is not hindered from his occupations, and it may be done

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at home by the patient himſelf; but if it is neceſſary for him to go from one place to another, I do not know how he can do it, with a part that is ſwelled and painful. If the inflammation has been moderate in ſome caſes, where the cauſtic has been applied, there are examples where it has been very great. In other caſes, the neceſſity of uſing inſtruments when the patient had hoped to avoid them on account of the cauſtic, is one of the ſtrongeſt motives not to ſpeak much in its praiſe. The cauſtic by no means ſaves the pain, but the dread of inſtruments; and it may be neceſſary to uſe them at laſt.

It is reaſonable to expect, that cauſtics may radically cure, and experience proves it, but this cannot be a ſufficient reaſon for

for preferring it, to a more ſure, and leſs painful method,—inciſion.

THE SETON.

An old cuſtom in ſurgery, againſt which many of the moſt experienced have exclaimed, is that of opening an abſceſs in its two extremities, and paſſing a ſeton through, in order to cleanſe that part of it which is concealed from his ſenſes. Such an operation has been likewiſe performed for the radical cure of the Hydrocele. The ancients uſed this method, and modern practitioners have revived it with ſucceſs. Mr. Pott having expatiated on the radical cure of the Hydrocele, has brought this method into repute in England. This very experienced ſurgeon, in his practice for many years, uſed inciſion; and

altho' it anſwered very well, yet he thought proper to quite it for the ſeton. The manner of paſſing it, is at the option of the operator, but the eaſieſt method, is to introduce a trocar as in the palliative cure, and through its cannula, a ſharp needle with a ſkain of ſilk, out at the oppoſite part of the tumor. Inflammation ariſes, which is great or ſmall, according to the patient's conſtitution. The ſeton ſhould not be moved for ſome days, whilſt the inflammation is in its vigor, during which anodyne topics may be uſed to mitigate the pain. When the inflammation and ſwelling are abated, and ſuppuration come on, the ſeton muſt be taken out by degrees, pulling one thread at a time, after which the parts will unite, and the radical cure be performed.

The

The ſeton, like other methods, will produce a radical cure, at leaſt in the greateſt number, but it is more painful than ſimple inciſion, where there is the eſſential advantage of diſcovering the interior parts of the diſeaſe; and the ſurgeon is ſure, that the cavity is intirely obliterated, of which he can never be certain, in the method by the ſeton, nor in that which I am going to mention.

THE TENT.

The methods deſcribed hitherto, and practiſed with ſucceſs, did not hinder practitioners from trying others, perhaps in their opinion eaſier and ſafer. Ruych in Holland, and Marini in Italy made uſe, very poſſibly, at the ſame time, of the tent. It is not certain to which of them the

the honor, if any, belongs. This method is practiſed in the following manner: The tumor being preſſed to make the ſkin tenſe, an opening is made with a biſtory, or lancet, ſo large as to admit a thick tent, which muſt be immediately introduced, before the water comes out, for afterwards its introduction would be very difficult, and likewiſe more painful, the parts being flaccid. Heiſter, mentioning the method of the tent, wonders why Marini ſhould adviſe not to let out the water; but the reaſon for it, is already given. The tent introduced into this artificial wound, to keep it from cloſing, excites an inflammation, from which a moſt painful ſwelling of the ſcrotum ariſes, that is almoſt always attended with fever. A poultice is proper to eaſe the pain.

The

The tent muſt be renewed ſome days after, but not till ſuppuration is come on, when it may be withdrawn with leſs pain. A new tent with ſome ſoft liniment, muſt be introduced once or twice a day, in proportion to the diſcharge; and the tent gradually leſſened, and finally ſuppreſſed. That the radical cure, even with this method, may be perfect, the cavity of the tunica vaginalis muſt be obliterated. Many radical cures have been performed by means of the tent. Mr. Baciocchi, firſt ſurgeon of the great hoſpital of Breſcia in Italy, and my father at Florence, practiſed this method with great ſucceſs.

The cures were not all compleated in the ſame ſpace of time, but moſtly in leſs than a month

a month. In thoſe caſes where the inflammation, and ſuppuration, have been greateſt, there was leſs danger of a relapſe; as it happened in the following caſe.

CASE VIII.

THE Marquis Albizzi of Ceſena, came to Florence in October 1774, to be cured of a diſeaſe, which troubled his mind more than his body. This was an Hydrocele, and a ſmall ſwelling of the teſticle. He had undergone ſeveral times the palliative cure. Mr. Molinelli, a ſurgeon of great merit in Bologna, having viſited this nobleman, told him, that the extirpation of the teſticle was neceſſary, ſuppoſing it to be an Hydro-ſarcocele. My father thought the teſticle was not in ſuch a ſtate as to require extirpation, and that the Hydrocele

Hydrocele was the chief diſeaſe. The cure was begun with the tent, according to the above mentioned method, on the ſecond of October.

The night after the operation, our patient was attacked with a ſhivering and fever, which continued for ſome days. The inflammation that cauſed the fever, appeared in the ſcrotum by a red and painful ſwelling. The morning of the ſixth day after the operation, the tent was taken out for the firſt time, and immediately another was introduced, a little ſmaller, and daily leſſened; and on the 24th day, it was intirely ſuppreſſed, the ſwelling being totally ſubſided, and the ſuppuration over. The wound was almoſt cicatrized, when a new tumor appeared, which augmented ſlowly. It was immediately

diately thought, to be a new Hydrocele and ſo it proved on examination. It was directly opened by an oblong inciſion, long enough to exhibit all the internal part of the ſac, which contained the water. This inciſion was healed in the ſimpleſt and ſureſt manner, and the patient enjoyed a perfect cure.

Beſides the uncertainty of obtaining a cure, by the tent, it is alſo extremely painful, owing to the neceſſity of renewing it often.

In the method by inciſion, the diſeaſe is all under the immediate inſpection of the ſurgeon, who ſees likewiſe the teſticle, which may be affected, although no outward ſign appears. In inciſion, the pain is not conſiderable, and in the ſubſequent dreſſings it is trifling.

THE

IRRITATION.

By means of irritaion, inflammation has been excited, from which the radical cure has proceeded. It has been propoſed to inflame the tunica vaginalis by irritating it with a pointed inſtrument, or by injecting into its cavity a ſtrong liquor; but this method, though in ſome caſes ſucceſsful, is not exempt from inconveniences. The injected liquor may remain incloſed for want of paſſage, and then the ſurgon be obliged to uſe inciſion, after the patient was flattered with the hopes of a perfect cure without it.

I have the following caſe from Mr. Gurſaud, profeſſor of ſurgery at the college of St. Come in Paris.

CASE IX.

A Man who had an Hydrocele, put himſelf under the care of a Pariſian ſurgeon, who made an opening into the tumor, and injected into its cavity ſome ſpirit of wine, great pain with inflammation, and fever came on, and it was found neceſſary to make an opening, to let out the fluid; in conſequence of the inciſion, a radical cure was obtained.

We need not be ſurprized, that the injection of aſtringent liquors ſhould produce a radical cure, ſince the ſame is experienced in children, by inſinuating ſome corroborating liquor through the pores of the part affected. Neither ſpirit of wine, nor a ſtrong alcaline ſolution ſo recommended, ſhould be uſed in the injection

injection. The inconveniencies have already been mentioned.

I have said, that an inflammation has been provoked in the tunica vaginalis, by irritating it with a sharp instrument.

A surgeon of Paris cured his son by making an opening into the tumor, and irritating the tunica vaginalis with a sharp probe, by which an inflammation was excited, and a radical cure obtained. Radical cures, have sometimes been produced by accidental blows; hence, percussion has been prescribed as a method of cure.

PERCUSSION.

Doctor Reghellini, a Venetian, to whom surgery is indebted for many useful

ful obſervations, propoſed this method, which by accident was ſucceſsful in the following caſe.

CASE X.

AN Engliſh gentleman, in the courſe of many years, had the palliative operation performed in Venice by Doctor Reghellini, ſeveral times. He was determined at laſt to undergo the radical cure by inciſion. As he was travelling through Italy with the doctor, one day he ſtopped at a place where they were playing at bowls; one of them happened to ſtrike him on the Hydrocele, and gave him moſt excruciating pain. Reghellini comforted him by ſaying, That the blow might put him in a fair way of obtaining the radical cure. The part inflamed,

inflamed, and ſuppurated. With the inflammation ended the diſeaſe.

Others have been cured by ſimilar accidents. The caſe mentioned by Mr. Pott, is exactly of this kind.

Doctor Reghellini 1764, in his obſervations on chirurgical caſes, publiſhed ſome remarks on the radical cure, by percuſſion. He propoſes to try it in all caſes of the Hydrocele, but though it ſucceeds in ſome, it may be dangerous in others.

Some of the above-mentioned methods viz. inciſion, ſeton, cauſtic, irritation, and others, contribute to perform the radical cure by exciting inflammation and adheſion. Other methods conſiſt in carrying away a piece of the ſac that contains the water,

water, by exciſion. I have remarked, that exciſion is not neceſſary, except when the tunica vaginalis is diſeaſed, and much altered from its natural ſtate. When the cavity is totally aboliſhed, then the cure will be perfect. Amongſt the various methods propoſed, the beſt ſhould be preferred, founded in practical obſervations, on which conſiſts the merit of this book.

About exciſion, enough has been ſaid; and when I ſpoke of inciſion, I obſerved, that its greateſt perfection, conſiſted in the ſurgeons having a complete view of the ſeat of the diſeaſe, and diſcovering whether the cavity of the tunica vaginalis is totally annihilated, and the teſticle in a ſound ſtate.

The

The true nature of the diſeaſe of the teſticle, in an Hydrocele, was perfectly underſtood by means of inciſion in the following caſe.

CASE XI.

A Country man was taken into the Royal Hoſpital of Santa Maria Nuova, on the 22d of April 1769, with an Hydrocele. His cure was begun by inciſion, which let out a large quantity of thick water. The teſticle was entirely rotten, but this did not prevent the cure being purſued in the uſual way, and the cavity of the tunica vaginalis was filled with dry lint. The inflammation which enſued, diſpoſed the diſeaſed teſticle to ſeparate; after the ſeparation of the dead parts, the wound

wound healed, and a complete cure was effected.

In the ſubſequent caſe, there were hydatides ſcattered along the ſpermatic chord.

CASE XII.

A Young country-man had an Hydrocele, from his infancy. The tumor growing troubleſome, he reſolved to undergo an operation for a radical cure. He was cured by inciſion in the hoſpital. When the tunica vaginalis was opened, there were found diſperſed along the ſpermatic chord, and on the teſticle, many ſmall hydatides, which were opened with the ſciſſors. The cure was managed in the

ſimpleſt

ſimpleſt way, and the patient left the hoſpital in a ſhort time, perfectly cured.

A diſeaſe in the teſticle, is often connected with the Hydrocele. The former ſhould be particularly attended to by the ſurgeon, as the water may proceed from the affection of the teſticle. It is not my intention to ſpeak here of this diſeaſe, which ſo united, forms the Hydro-ſarcocele.

The chief end of this treatiſe was to determine which of the various methods practiſed for the radical cure of the Hydrocele, ought to be preferred. I ſhould think that by inciſion, in the majority of caſes.

I have endeavoured to fulfil what I propoſed, by obſervations founded on experience,

experience, the ſureſt guide in matters of importance. The caſes I have recited, were neceſſary to illuſtrate the different methods adopted, by the moſt celebrated practitioners of this enlightened century in many kingdoms of Europe.

THE END.

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